Literature in Context: A Digital Anthology of Literature in English, 1650-1850

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The proliferation of digital literary texts in the college classroom has proven to be a mixed blessing. While such texts are very often free, they are without authority and typically poorly edited, if they are edited at all. Few are contextualized in even the most basic ways, with introductory material, annotations, glossaries, all tools that college students need to make sense of literary texts; far fewer still take advantage of the affordances offered by the digital environment. This white paper outlines our NEH-funded project to design an open-access digital "anthology" of literary texts in English from the seventeenth into the nineteenth century. Relying on open standards and open-access software, *Literature in Context* aims to develop an Open Educational Resource that involves students in the production and editing of texts for use by faculty and students.

Literature in Context: An Open Anthology of Literature in English, 1660-1850, was awarded Level II NEH ODH Advancement funds for a grant period beginning in January 2018 and ending, after a no-cost extension, in December 2019. A born-digital anthology of literature in English over the long eighteenth century, a formative period in the development of the modern world, our project is also an Open Educational Resource for the use of teachers, students, and the general public. This project emerged out of our belief that digitization has created tremendous possibilities for rich student interaction with some of the most central objects in the humanities--literary texts--but that these possibilities are currently unrealized. Commercial book publishers are digitizing texts, including anthologies, in ways that make them hard to use and that reduce costs little, if at all. Meanwhile, the Internet is flooded with free digitized texts that students often use in the place of expensive print editions, but that are unreliable; barely edited if at all, lacking annotation or contextualization, and sometimes corrupt or misleading. Literature in Context seeks to remedy an unexpected—and unintended—consequence of 25 years of digitization of literary texts. While the widespread free availability of the texts of numerous novels, poems, essays, histories, and plays has the potential to enable new modes of inquiry that could barely have been imagined a generation ago, the accuracy, quality, and authority of digitized texts is far from uniform. Scholars are generally well-positioned to assess the reliability of texts they encounter online and choose their sources accordingly, but students and other newcomers to the field are not. The sheer abundance of

material that appears in a simple Google search--often the first means of access for students--can overwhelm the inexperienced, who are not in a position to judge the quality or authenticity of what they find.

We sought, with *Literature in Context*, to create a platform for establishing authoritative, contextualized works that teachers and readers can use with confidence. The project began as an attempt to merge two experimental classroom projects that have been developed over the past few years by John O'Brien and Tonya Howe, two of the principal investigators: the *Open* Anthology of Literature and Novels in Context. Over the grant period, we began the process evaluating platform options and developing a web-based application that would store, read, render, and export in a variety of ways well-edited and annotated XML editions of frequently-taught texts from the college literature survey course. Using the Open Syllabus Project, we identified a number of texts that would make a strong start on our anthology content, we developed a clear and consistent TEI standard for works in a variety of genres, and we now have work by fourteen authors in the anthology largely ready for classroom use. We worked with students to create and document best practices for creating well-supported annotations, and where possible, we incorporated facsimile page views to supplement the reading experience. This grant also allowed us to refine a variety of pedagogical functions, including the development of coursepacks or mini-anthologies from the collection, the implementation of a collaborative reading and annotation Hypothesis layer, and beta-stage linked open data experiments with mapping and personograpy information. Today, the project exists in stable and usable form online, and it is open to collaboration on GitHub, both in the creation or revision of texts and in the development of the application itself.

Equally, if not more importantly, *Literature in Context* also sought to create a process for the classroom-sourced creation of these digital editions, and to model a collaborative approach to such work. We see a lot of pedagogical value in taking advantage of the opportunity to teach students, through hands-on and publicly-visible work, about the construction and creation of text-based knowledge, not the least of which is a robust form of informational literacy. By involving students at both universities in the process of editing and annotating the texts, the project fosters collaboration and public-mindedness. Our ultimate goal is that this anthology can be used in the classroom as an archive of reliable texts, but also that students and teachers at other colleges, universities, and even perhaps secondary schools, can contribute by editing their own texts to be contributed to the larger archive.

In the initial stage of the grant project, one of our most important goals was to standardize our separate projects into a single platform. We initially identified WordPress as a user-friendly option with wide adoption. However, upon reflection, experimentation, and consultation, we did not see WordPress as a long-term solution, largely because the platform did not easily ingest XML files, and it required a variety of purpose built plugins that would need frequent updating. We worked with Performant Solutions of Charlottesville to explore options

like Manifold or Jekyll, using GitHub as a stable repository. Ultimately, we rejected Manifold and Jekyll because of the need to create dynamic, multimedia-rich and interactive reading experiences. We ultimately determined that eXist-db, with data and application repositories on GitHub and Amazon Web Services, was a better solution for stability, version control, and collaboration. We set up GitHub repositories for both the application and the data. Working with the University of Virginia Library's information technology team, we also established a cloud hosting solution for the project via Amazon Web Services. The project's development site is available online, as is the stable public release. The complexities of involving students and non-expert contributors demanded a platform solution that was easy to use and hard to break, needing limited monitoring and upkeep. In addition, Oxygen, the industry-standard XML editing and authoring program, integrates easily with GitHub, making the work of creating and revising the texts we developed relatively seamless. Keeping in mind that there are costs associated with this kind of work, we also identified low-tech options for contributors who were unable to or uninterested in purchasing, setting up, and using the interconnected application structure set up by our developer, Winona Salesky, in conjunction with staff at The University of Virginia. Not surprisingly, Google Docs proved a useful tool for collaboration outside of Oxygen.

Most of the platform's functionality is now in place, and we are pleased with the progress we have made. Key aspects of *Literature in Context* include the ability to conduct a variety of full-text searches; the creation of login identities that enable users to generate and store for student use individualized, class-specific coursepacks; citation functionality and COINS connectivity that allows the ingestion of texts into research documentation tools like Zotero; and the documentation of contributor identification, an important ideological component of our pedagogical work. In addition, the platform makes visible the provenance of each source, as well as facsimile page images, where available. Finally, and crucially, the texts are annotated with supporting or clarifying research and a variety of media supplements.

The activities supported by this grant have helped us identify areas for improvement and further development, especially in cleaning the XML; implementing the integrated display of headnotes, common in most print anthologies; and creating a way to collect annotations from the public in a simplified manner through the application itself. We have also begun to investigate additional functionality that can deepen students' reading experiences, like Hypothesis as a collaborative reading/annotation layer and visualizations of data contained in the XML.

The Problem: Digitization of Literary Texts as a Market Failure

The impetus for this project arose from our experience as college teachers whose students often brought in poorly-edited, unauthoritative digital texts rather than the reliable print editions that we had ordered through our university bookstores. Students have every incentive to do this--the digital texts are typically free--but the pedagogical costs are high. Like many instructors, we have explored the existing options for digital literary texts that we might offer as good substitutes for the poorly edited ones that students find on their own. But commercial textbook publishers have not to this point produced many digital versions of their print texts that instructors could turn to at any price. We identify this as a market failure, the dimensions of which we sketch out in this section.

A number of commercial textbook publishers have begun offering digital materials designed to supplement existing print editions. Cengage Learning, for example, offers a number of digital courseware supplements to the print version of the *Heath Anthology of American Literature*. Each of these supplements come with, their website promises, "reading comprehension quizzes, interactive media, web links, and author biographies... materials, such as maps and images, to help provide historical, social and political context for these works" as well as "a glossary of literary terms... [and] interactive flashcards." The supplements can be rented on an individual basis for \$23.95 per six-month period, and each also comes with the e-text of a full-length work: *The Scarlet Letter*, *Huckleberry Finn*, *Moby Dick*, *The Awakening*, and *The Autobiography of Benjamin Franklin* (this last misidentified by Cengage as a "novel.")

For its part, the industry-leading *Norton Anthology of English Literature* offers a number of digital supplements to the core volumes of the anthology, which is available in a number of print formats.¹ There is currently no digital edition of the current, tenth edition of the *Norton Anthology of English Literature* itself. Rather, purchase of one or more print volumes entitles the purchaser, or a class, to have access to sets of "Instructor Resources," described as "high-quality, book-specific resources for your teaching and assessment needs" and "Learning Tools," described as "affordable learning and assessment tools that engage students and help you meet your course goals." ² The instructor resources are extensive, and of several types. There are images of authors and historical contexts for literary works (for example, images of children working in mines to accompany Elizabeth' Barrett Browning's poem "The Cry of the Children"), short videos (three to eight minutes each) featuring the Norton's editors discussing various topics ("Why Read Chaucer Today?"), and supplemental texts, most of them from previous editions of the Norton Anthology, and available as PDF for downloading by students and instructors. There is a manual for instructors, which is a PDF version of the print manual that Norton has long

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¹ In its last several editions, the *Norton Anthology of English Literature* has been broken up into six separate print volumes, which roughly correspond to long-standing divisions of literary periods: Volume A (The Middle Ages), Volume B (The Sixteen Century and Early Seventeenth Century), Volume C (The Restoration and Eighteenth Century), Volume D (The Romantic Period), Volume E (The Victorian Period), and Volume F (The Twentieth and Twenty-First Centuries). Instructors can order these as individual volumes for their classes, or request bundles, most typically a package with volumes A, B, and C or volumes D, E, and F.

² See https://www.norton.com/books/9780393603057/about-the-book/product-details.

made available, PowerPoint presentations, and quizzes, which can be integrated with learning management systems like Sakai, Blackboard, and Canvas. The digital tools are impressively extensive, but they serve as supplements to an edition that was born in, and remains based in, print. The entire package is also expensive: individual paperback volumes range from \$58.75 (e.g. Volume A) to \$65.00 (volume F); Norton creates an incentive for instructors to bundle three volumes at a total price of \$86.25.

The Norton Anthology of American Literature, now in its ninth edition, does come in e-book form. Purchasers of the e-book edition get digital "learning tools" such as "close reading workshops" for a number of texts and quizzes. At \$35.00, the e-book version is not inexpensive, but it is far cheaper than the \$67.00 price of the paperback edition that it reproduces and extends. And Norton, unlike Cengage, allows students and instructors to purchase, rather than rent the text. But the digital Norton Anthology of American Literature remains in large part a digitized transcription of the print edition. (We assume that Norton has every intention of doing the same to their English literature anthology in due course.) To be sure, some affordances of digitization are included; footnotes now pop up on demand, an annotation tool is built in, and a citation generator allows students to create citations automatically. But it is clear that these are additions layered on to a product that was created in the world of print technology rather than one that was born digital. Conceived in print, the Norton Anthologies as yet make only limited use of the rich affordances provided by digitization.

Commercially-produced born-digital products for teachers and students of literature have not yet flourished. Luminary Digital Media, for example, received a lot of media attention at its launch in 2012 when it began to develop iPad apps for several Shakespeare plays: *Richard III*, *Hamlet, Macbeth*, and others.³ TouchPress developed an excellent iPad app for T. S. Eliot's *The Waste Land* at around the same time. Conceived as a "fully realized digital book, an embodiment of a pedagogy that values interaction between a reader and an author and among readers themselves" (Rosen), Luminary's promising work depended on a technological ecosystem that seemed promising at the time as a way to provide media-rich versions of literary texts. But the iOS ecosystem has evolved in ways that have discouraged further innovation in this space. Apple's rules now steer digitized books largely in the direction of its iBooks application, creating an ever more siloed and proprietary approach that stymies interoperability and open access, even if the iBook is technically "free".⁴ Luminary has been fairly dormant in recent years; its website has not been updated since 2012, when it was launched. The company's most recent blog post is from 2014.

In sum, after more than two decades during which literary texts have been digitized, and after close to a decade in which publishers have been announcing their desire to bring their offerings to digital formats, the commercial textbook market has failed to produce a viable

³ See Zax, et al., "The App's The Thing: Shakespeare, Rebooted" and Rosen, "Why a 17th-Century Text Is the Perfect Starting Point for Reinventing the Book."

⁴ See O'Brien and Pasanek, "This Is Not a Book."

solution to which instructors in the secondary school and college literature classroom can turn. Rather, we have a balkanized situation, with unevenly-produced materials locked behind proprietary paywalls, providing little if any savings to students and schools. Most importantly, none of these projects begins to take full advantage of the affordances offered by a digital environment. What kinds of alternatives to a market solution are out there?

The Promise and Challenge of OER

In the face of the market failure described above, Open Educational Resources would seem to be a good place to turn. But there are better and worse ways to do this, and to this point, the OER movement has similarly failed to produce a viable, much less an optimal, solution for college or secondary school instructors who want or in some cases need to use digitized literary texts. While Project Gutenberg, an enormous archive of digitized books, launched in 1970, the OER movement as we know it today began in the early 2000s--Wikipedia, perhaps the single most well-known OER, launched in 2001. To date, many tiered research universities are participating. MIT, Carnegie Mellon, Rice University, Johns Hopkins, and more all have major OER programs. 5 Open Educational Resources refer to the growing number of educational resources--courseware, open access journals, videos, PowerPoints, activities, and so on--made available with few, if any, restrictions on use and re-use. Resources should be built in a manner that makes source code available; there should be no subscription fees; and copyright and licensing criteria should be as minimal as possible. The OER movement is motivated by the core belief that knowledge is a public good, and that knowledge should be open, shareable, and reusable. OER also appeals to many because it offers the prospect of lowering textbook costs, which have grown at many times the rate of inflation.⁷

The same problems that arise from public domain texts available on the web, however, occur with Open Educational Resources, too. While faculty are often involved in the construction of OER for their classes, which could increase positive perception of their quality, adopting or creating OER is more difficult and costly than it may seem at first glance. Faculty creating OER for their courses and colleges need professional development funds, and universities need to invest in costs to store, maintain, and update the materials. Even if faculty are not creating the OER themselves, there are many hidden costs, including the time required to

⁵ See Straumsheim, "CUNY, SUNY Plan Major Expansion of OER Efforts." For an up-to-date collection of OER projects, see SPARC, "List of North American OER Policies & Projects."

⁶ See UNESCO, ""The Paris OER Declaration 2012."

⁷ The Federal Bureau of Labor Statistics estimates that textbook costs increased by roughly 88 per cent between 2006 and 2016, compared with an overall rate of inflation of 21 per cent over that period (U.S. Bureau of Labor Statistics). See also Senack and Donoghue, "Covering the Cost."

⁸ See Desetti, "The Too Often Hidden Cost of OER"; Lederman, "Calculating (and Acknowledging) the Costs of OER"; Ikahihifo et al., "Assessing the Savings from Open Educational Resources on Student Academic Goals"; Kortemeyer, "Ten Years Later: Why Open Educational Resources Have Not Noticeably Affected Higher Education, and Why We Should Care."

locate useful materials, assemble them, and revise course plans. Students may not be likely to perceive any existing quality concerns around open textbooks, for the same reasons outlined above, and use them as much or more than traditional textbooks; however, quality, or perception of quality, is one of the chief hurdles to fuller use of OER by faculty. Some of the reticence around OER is part and parcel of a larger peer review problem that has grown as traditional scholarly publishing models have broken down.

A variety of institutes and organizations across the world are working on making education more sustainable and accessible by advocating for open educational practices and enabling the construction and dissemination of OER. The Institute for the Study of Knowledge Management in Education is a non-profit, Silicon Valley-based organization founded in 2002 to facilitate knowledge-sharing; ISKME describes the OER movement as "rooted in the human right to access high-quality education. This shift in educational practice is not just about cost savings and easy access to openly licensed content; it's about participation and co-creation" ("OER Commons & Open Education"). In many ways, this is a deeply-rooted belief shared by not just members of the open access community, but educators and students of literary history and language more broadly, and even a core Enlightenment value. ISKME has created OER Commons, a digital "knowledge network," that aggregates over 50,000 OER including open textbooks, open university courses, educational videos, webpages, and a variety of activities and assignments to accompany student learning. Users can download, use, often remix, and contribute materials, making them more easily available to learners, and a login function allows users to save materials for later use. A rating system, which seems to be little-used, can help teachers identify quality materials. However, the platform is geared largely toward K-12 educators, and while it contains several literary resources--nowhere near as many as in other disciplines--they vary widely in audience and purpose, and broadly do not contain quality study editions. Nonetheless, OER Commons can be a vital source for the sharing of materials like those we are creating with *Literature in Context*; in 2016, OpenStax began partnering with OER Commons. 11 There is great promise in the practices of openness associated with OER. Yet, there are many challenges facing the movement, especially in the humanities, including cost, discoverability, curation, peer-review, and adaptability. 12

⁹ See Silagadze, "The Evolution of Educational Publishing: Does OER Have a Quality Problem?"; Chatlani, "Survey: OER Adoption in Higher Ed Still Slow"; and Bliss, et al., "The Cost and Quality of Online Open Textbooks." According to the study by Bliss et al, perceptions of open textbook quality among community college faculty and students indicated more positivity than negativity. Negative feedback pointed to frustration not with the quality of the texts, but with challenges to online access and other technological problems.

¹⁰ See Fitzpatrick, *Planned Obsolescence* and "Giving It Away"; Cavanagh, "Living in a Digital World: Rethinking Peer Review, Collaboration, and Open Access"; Anderson and McPherson, "Engaging Digital Scholarship: Thoughts on Evaluating Multimedia Scholarship."

¹¹ See Boyd, "OpenStax, OER Commons Partner on Community Hubs."

¹² In addition to those previously-mentioned, see the exhaustive and still-relevant 2007 report by Daniel E. Atkins, John Seely Brown, and Allen L. Hammond, "A Review of the Open Educational Resources (OER) Movement: Achievements, Challenges, and New Opportunities."

Nonetheless, there is much optimism around the power of OER to make higher education more accessible and less costly, especially as governmental organizations become involved. Some examples include VIVA, Virginia's academic library consortium, and GALILEO, Georgia's virtual library. Both offer grants¹³ to create OER for higher education, and the GALILEO Open Learning Materials repository contains several anthologies of literature, including American, British, and World literature. Administered by Affordable Learning Georgia, a governmental organization that seeks to reduce textbook costs and help students retain and graduate, GALILEO materials, especially the literature anthologies, are edited most frequently by faculty from the University of North Georgia, offered under Creative Commons licensing, and hold an imprint of both Affordable Learning Georgia and the University of North Georgia Press. All materials can be freely downloaded in PDF or Word, or purchased in print--the British Literature I anthology comes in four printable parts, each of which can be purchased for \$15-\$25. Other organizations like the Rebus Foundation are, too. investing in OER. 14 These are deeply valuable initiatives that, while slow to transform higher education, are moving in the right direction. Yet, the structural logic of print persists, and as in the examples of for-profit publishers noted above, none of the GALILEO textbooks use born-digital affordances to create richer, more flexible reading experiences--they are essentially static PDFs.

One of the most interesting OER textbook projects is OpenStax, developed at Rice University. OpenStax operates on a hybrid print/digital, non-profit/commercial model. Its textbooks, which are developed and written by scholars in the field and undergo a peer review process, are available for reading at no cost online, and can be printed from freely downloadable PDFs. Print copies can be ordered at prices that are generally well below the price of commercial textbooks, and OpenStax also offers versions of many of their textbooks in Apple's proprietary iBook format through the iBookstore. Additional courseware--sample questions, problem sets, exercises--is provided for additional cost by a group of commercial "OpenStax Partners" like Barnes and Noble, Cengage, and TopHat. These are often in the form of apps that can be used on a smartphone. OpenStax's model is intriguing, but its limitation of its fully-digitized primary texts to the proprietary iBooks format rather than an open standard like EPUB is regrettable. And, more importantly, OpenStax has not yet produced any texts for literary studies. In fact, it

¹³ VIVA's grants (https://vivalib.org/c.php?g=836990&p=6425615) are for course redesign to use or create OER, and Affordable Learning Georgia's are for textbook transformation (https://www.affordablelearninggeorgia.org/about/textbook_transformation_grants). Many states have these kinds of initiatives. For a comprehensive directory of OER projects, many of which offer grants as well, see SPARC, "List of

initiatives. For a comprehensive directory of OER projects, many of which offer grants as well, see SPARC, "List of North American OER Policies & Projects."

14 The PressBooks project (https://pressbooks.com/), organized by the Rebus Foundation and supported with grant

funding from the Hewett and the Mellon Foundations, is designed to create a platform for open educational resources. One of their first projects, an *Open Anthology of Earlier American Literature* (https://openamlit.pressbooks.com/) resembles ours in some ways. See Robin de Rosa's blog post about this project, "My Open Textbook: Pedagogy and Practice."

¹⁵ Online editions can be read for free, or downloaded into an iPad or Android app that provides "StudyEdge" tools for a subscription of \$14.99/month. The U.S. History OpenStax textbook is available for print purchase at \$52, and on iBooks for download at \$6.99.

offers little in the humanities, only at the moment a U. S. History textbook. The lack, to this point, of a literature textbook perhaps indicates the particular challenge that literary texts pose to the OpenStax business model.

All of this history of online learning materials repositories, however, belies one additional truth that we as educators in an increasingly digital world are not quite prepared to face. Students are not as equipped to read fully and deeply online, period. Study after study has shown that reading online is difficult, and it tends to look more like skimming than reading; students still read more deeply in print, and many students recognize this, even as they seek digital alternatives. ¹⁶ While students may be attracted to the lower cost and the ease of access provided by online materials, reading in print still enables the robust textual engagement that is our primary goal in the literature classroom. The simplicity of the page, even as it transitions into the interface, is still a meaningful technology. 17 How can the promise of OER work for students and faculty in the humanities, whose primary object is text, and whose primary mode of engagement with it, reading? With the Council on Library and Information Resources, we believe that "our migration to the digital commons will succeed only with the assumption of greater responsibility for its management, design, and sustainability. We must constantly and consistently rethink and reinvent as we trade places with an ancient and once comfortable analog world" (The Idea of Order, 3). An open anthology that teachers, students, and readers can turn to with confidence will allow students who do not have the means to purchase costly print versions to nonetheless access high-quality texts. And students can become participants in the production of these texts, in the process learning a great deal about digitization, copyright, and markup, while engaging deeply with literary works in a digital environment.

With help from the NEH we have designed our prototype of *Literature in Context* to serve as a model for such an open anthology, one that is further designed to facilitate student participation in the process of editing and annotating texts. In what follows, we lay out features of our prototype, and identify the areas that we hope can be developed further in the next stages of the project.

Selection of Texts

By looking to the Open Syllabus Project, we identified several key texts to incorporate in this first proof-of-concept phase of development, texts that have wide adoption in secondary school and college classrooms already. The Open Syllabus Project, which collates

¹⁶ Naomi Baron's work is particularly worth reading on this subject; see *Words Onscreen* and "Do Students Lose Depth in Digital Reading?" See also Herold, "Digital Reading Poses Learning Challenges for Students"; Howard, "For Many Students, Print Is Still King"; Robertson, "What's Wrong with Online Readings?"; O'Malley, "Which Is Better -- Reading in Print or on-Screen?"; Allcott, Lisa. "Reading On-Screen vs Reading in Print: What's the Difference for Learning?"; Robb, "92 Percent of College Students Prefer Reading Print Books to E-Readers"; Woody, et al., "E-Books or Textbooks: Students Prefer Textbooks."

¹⁷ For an examination of the page as an interface and how it has changed over time, see Mak, *How the Page Matters*.

publicly-available and faculty-contributed syllabi and makes the data about texts taught available to users in a variety of ways, currently includes data from over 363,000 syllabi in the fields of English and American Literature. Among the top 100 texts taught in college literature courses are a notable representation of long eighteenth-century texts, including Mary Shelley's Frankenstein (#3 after A Writer's Reference and They Say/I Say), Jonathan Swift's A Modest Proposal (#20) and Gulliver's Travels (#34), Jane Austen's Pride and Prejudice (#48), Mary Wollstonecraft's A Vindication of the Rights of Woman (#53) and Mary: A Fiction (#91), Alexander Pope's *The Rape of the Lock* (#62), Aphra Behn's Oroonoko (#78), and Benjamin Franklin's Autobiography (#98). In Literature in Context currently are Frankenstein (1818) edition), with a large number of annotations and complete page images; A Modest Proposal and Book 1 of *Gulliver's Travels*; *The Rape of the Lock*; *Oroonoko*; and Franklin's *Autobiography*. While we are still in the process of actively incorporating, annotating, and imaging texts, and while we continue to seek collaborators, a number of these frequently-taught texts and several less canonical sources are now available for classroom use. We are currently looking for colleagues to help us add additional materials to the database, including more frequently anthologised materials both literary and philosophical or essayistic. The site as it stands now, while still largely a developmental proof-of-concept, would be sufficient to be used in an undergraduate survey course of the period's literature. Crucially, the project seeks to be explicit about its construction, its gaps, and its avenues for further work, modeling knowledge-making as an ongoing, collaborative process. Far more than print anthologies, which are limited by the capacity of the codex format, this digital anthology can grow over time as users add texts, annotations, and supporting material.

Annotation Features

The annotations in the editions themselves have been constructed by students and faculty, either as part of regular term coursework or during summer independent projects. Determining what to annotate, how extensive to make the annotations, what multimedia to include in digital annotations, and how extensively the annotations should be researched were all challenges that we sought to address collaboratively, and with the open access goals of the project in mind. Students often know better than teachers what they *need* to know to make sense of a text. Given that our students are not experts, we needed to develop clear guidelines and an overall approach based in identifying common knowledge, thorough and hyperlinked citation practices for material contained in journals or books, and a hierarchy of preferred research sources. These are themselves valuable lessons in research skills, and how to use the tools that scholars have developed to find information that is relevant to putting a literary text in its historical, literary, and cultural contexts.

One cause of this barren blooming I attribute to a false system of education, gathered from the books written on this subject by men, who considering females rather than human creatures, have been more anxious to make them alluring mistresses than rational wives; and the understanding of sex has been so bubbled by this specious homage, that the civilized women of the present century, with a few exceptions, are only anxious to inspire love, when they ought to cherish a nobler ambition, and by their abilities and virtues exact respect.

In a treatise, therefore, on female rights and manners, the works which have been particularly written for their improvement must not be overlooked especially when it is asserted, in direct terms, that the minds of women are enfeebled by false refinement;

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A term used by Westerners to refer to Muslims, in this context Mahometanism is associated with the limited opportunities and oppressed status of women in the eighteenth century. As discussed in The Feminization Debate in Eighteenth-Century England (2004) by E. Clery, women were trained to obey their father and husband. This confinement and domesticization was frequently described as "Mahometan" due to the misguided belief among the English that Islam sees women as not possessing souls. Social reformer and leader of the Blue Stockings Society, Elizabeth Montagu lamented in a letter about the effects of such "Mahometan" belief, which is used to justify women's domestic confinement (Clery 136). The image included here, an 1848 lithograph by James Rattray, shows Afgan women under purdah. Image via Wikimedia Commons. - [BT]



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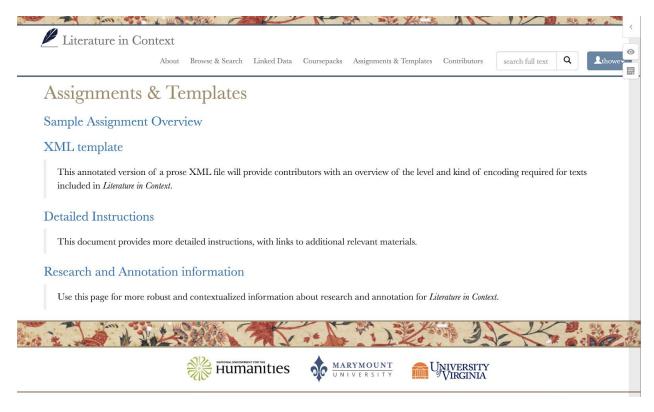
This discussion naturally divides the subject. I shall first consider women in the

Above: Screenshot of a student-authored annotation for an excerpt of Wollstonecraft's Vindication

In order to ensure that student work is beneficial to future users, we sought to restrict annotations to objective knowledge, rather than interpretive knowledge, though to a great extent the very choice of what to annotate or notice is interpretive. Similarly, the selection of sources and the depth of annotation all create moments for classroom discussion around information literacy, audience, and purpose.

Assignments and Templates

We have developed several assignments, an XML template, and an annotation guide to help support pedagogical activities with *Literature in Context*; however, this work is by nature highly individualized, and faculty may choose to employ this site in any number of ways. The image below shows our working page linking out to a variety of resources that faculty and students can use, download, and adapt for their own purposes.



Above: Assignments and templates page

The process of constructing an annotation will be different in any particular context. Students might first work on paper using models provided by the instructor. We emphasize the use of attributive phrases, source documentation with hyperlinks (ideally to a stable URL), and images or other media appropriate for the material in both topic and time of creation. We have found that composing in a collaborative writing space that also allows students to store files, like Google Docs and Drive, facilitated the process, and files to be incorporated into an annotation can easily be stored, renamed, linked to the annotation in XML, and then uploaded to AWS. Copyright considerations must be taken into consideration, and all media of course need to be available legally for use in this fashion. Again, this provides a teaching opportunity, a means of instructing students about copyright issues, about the concept of the public domain, and about Creative Commons licenses. We emphasize therefore the need to source materials from libraries, museums, and—surprisingly—Wikimedia Commons, where cultural institutions often store images for public use. If copyright information is not clear, students should reach out to the institution and ask about using it, creating vertical and horizontal integration of many aspects of information literacy.

Once the annotations have been written and all source materials gathered, the work can be reframed in XML. Models and templates can begin the process of rendering the content machine-readable straightforward, and this work can demystify much of the digital world our

students inhabit. If this is not a process faculty feel is pedagogically useful for their courses, a student volunteer from the IT program or a curious student seeking extra credit (or any other similar configuration) can contribute, or the materials can be sent to us for integration.

Mohamed, Muna (1 annotation, 1 text)
 Marymount University
 A Vindication of the Rights of Woman (1 annotations)

trifling employments

By "trifling employments," Wollstonecraft refers to the kinds of things elegant women did to employ their time such as needlepoint. Not allowed to participate in the masculine public sphere, women instead spent their time in domestic labor and activities. Many were mothers and homemakers. These activities were not masculine and serious but feminine and trifling. Read more on women's work in the eighteenth century in this article by Susan E. Jones, also the source of this annotation. The portrait above, via the Frick Collection, is a conversation piece by Joshua Reynolds (1723–1792) showing the genteel young ladies Waldegrave engaged in such domestic work.



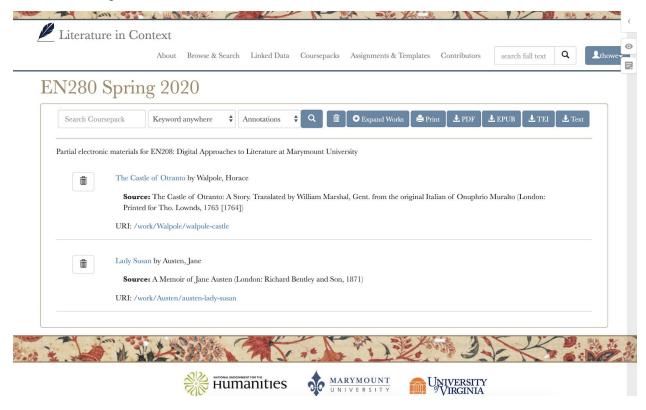
Above: Visibility of student labor

One essential aspect of the annotation process is the crediting of student labor. A web-based release form helps students understand their rights. Students can be acknowledged individually or as an anonymous group—this information is stored in the annotations themselves, and with personography details stored in the editors file. The image above shows a single student contributor and her contributions, which are all accessible through the Contributors page. Users encountering an annotated digital edition can know who wrote the annotation, and faculty can easily identify all annotations linked to individual student names. This aspect makes assessing students' work easier for faculty, and it also ensures that students can see the public impact of their labor. It also makes it possible to cite individual annotations, bringing the scholarly conversation full circle for many students. Annotations can be included or removed from the full text search options.

Coursepack Features

Few instructors are likely to use more than a selection of the texts we have on the site right now, and as it grows in the future (as we hope it will), instructors will have need of an even smaller percentage of the texts. (This is one of the issues that instructors and students have with print anthologies; they are expensive, and the number of pages that go unused in any given year is enormous and wasteful). Thus we have built in the capacity for instructors to build customized coursepacks that contain as much or as little as they like. Such coursepacks can be

private (for example, for the use of a particular class) and saved by an instructor for multiple uses. They can be printed out in pdf form, or converted to EPUB format for easier reading on tablets or smartphones.



Above: A sample coursepack

In the screenshot of the sample coursepack above is visible a variety of features of use to faculty and students alike. Users can search within the coursepack (including or excluding annotations), expand the works to be read on the screen, print the materials, or save to a PDF or EPUB for other readers. Additionally, curious users can download the TEI or the plain text. These coursepacks can be saved for permanent storage on our web servers, where students can access them for coursework.

Reading Skins

Not all students read in the same ways, or on the same platforms; however, all classrooms need students to cite the work they use accurately. Our project has created a variety of reading experiences, in addition to the ability to download PDF or EPUB versions of individual texts as well as coursepack collections for printing. Texts can be read on the web using a laptop or a desktop, or they can be accessed via a responsive mobile site. On the web, all annotations pop up for reading and other forms of interaction, like diving further into the

sources cited. When the texts are prepared for printing, annotations are no longer pop ups, but endnotes. We feel it is important for young readers to see a facsimile version of the text at hand, and so incorporate page images that pair with the etext that has been transcribed. The default web view does not reveal these sometimes large files, but the images can be toggled on and off to appear on the right side of the screen and tied to the page beginnings in the XML. Citability is essential, so all poems incorporate line numbers, and all texts, to the extent possible, have incorporated page numbers keyed to the page beginnings in the XML.

When students view a coursepack or a single text with annotations in PDF form, the annotations are rendered not, of course, as popups, but rather as endnotes, as you can see in the image below.

"Numbers" refers to the metrical quality of poetic verse; it also metonymically signifies poetry in general. In Alexander Pope's "Epistle to Arbuthnot," he says that he "lisp'd in numbers, for the numbers came" (128), suggesting that he spoke in poetic form even as a child. Poetry is associated with music because of the metrical quality of both. Finch's use of the word "set" in this line emphasizes musicality, specifically the setting of words to music (see OED "set" v1, 73.a).

- [TH]

According to the *Encyclopedia Britanica*, a "Lay" refers to a song or story in song. Finch in this instance is seeking to create a poem that mirrors the song of the Nightingale.

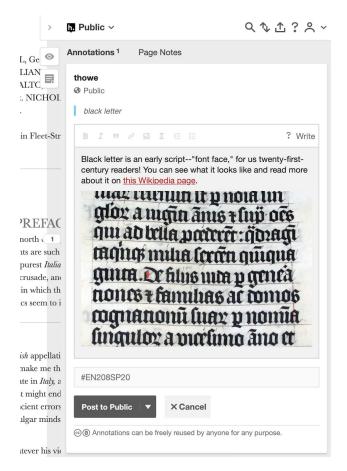
- [JW]

According to A Dictionary of Greek and Roman Biography and Mythology , the Muses are "inspiring goddesses of song" who "presid[e] over the different kinds of poetry, and over the arts and sciences." In this poem, Finch positions the nightingale as her muse and rival.

- [JW]

Above: Annotations converted to endnotes for PDF viewing/printing

To further engage students in the use of these materials, we have incorporated a native layer of Hypothesis, which allows users across the web to create a user ID, join classroom groups, and add private or public reading notes. These notes are stored not in the user's browser, but in the Hypothesis layer on Literature in Context. The Hypothesis layer is accessible both in the general reading skin, as well as in the coursepacks, though not in the downloadable coursepack files. Hypothesis allows users to annotate, highlight, or note-take in ways that stay with the text. The screenshot below shows a simple public annotation and class tag using Hypothesis--students can add websites, images, and more to facilitate discussion, and logging in enables this work to remain private. We are hopeful that Hypothesis may offer a way to deepen the classroom sourcing of annotations and, also, enable annotations to be pulled into the XML itself. This functionality, however, does not yet exist.



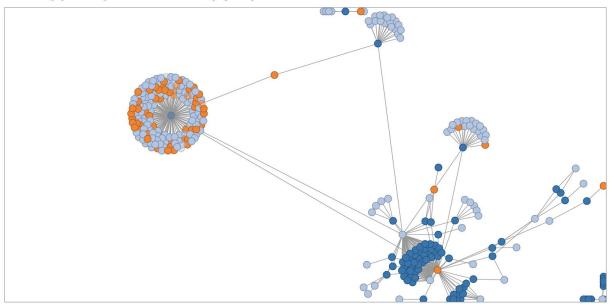
Above: Sample annotation using Hypothesis

Future Directions

Future directions for *Literature in Context* include, principally, refining and systematizing the XML, which has proven a challenge given the distributed nature of the project and our emphasis on collaboration across campuses. However, we also plan to continue expanding and refining the Linked Open Data visualizations, which currently include a timeline of the collection's publication dates, a map of places referenced in the collection, and a force-directed graph showing people and places associated with texts in the collection. The images below show three of these visualizations, and this kind of work can be useful in imagining the future of the project.

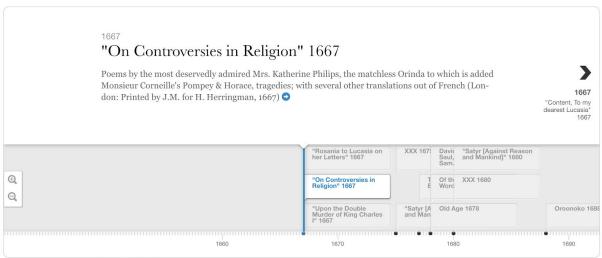
Collection Graph

A linked data graph visualizing the connection between works, people and places in the collection.



Publication Dates

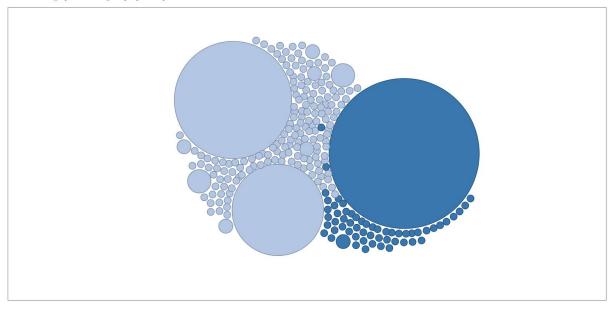
A timeline of works in the collection.



^{*}Timeline generated with http://timeline.knightlab.com/

Persons and Places Graph

A linked data graph visualizing the people and places referenced in the collection.



Above: Working visualizations drawing on the XML and associated Linked Open Data

We hope especially to apply for additional funding to support these avenues for development; to gain contributors and users; to refine the XML--no XML database is better than its data; and to enhance the sample assignments and activity materials currently available on the website.

This white paper was completed in the first month of the COVID-19 crisis, when both of our universities, like most institutions of higher education in the United States, suddenly found themselves moving their entire curriculum online with less than a week's advance notice. Within days, our e-mail inboxes were populated with advertisements from tech companies offering to help, in many cases providing temporary free access to their digital learning products and platforms. The ratio of genuine desire to be helpful to exploitation in such appeals is hard to determine. For the moment, we take the multiplicity of these appeals to be evidence of the *lack* of clear alternatives to paper course materials in the high education English classroom, and the market's continued failure to steer a clear path forward. We continue to see Open Educational Resources developed on long-standing open tools such as eXist-db and TEI to represent the best and most sustainable way forward.

There is much work to be done in the production of and advocacy for thoughtful, well-designed Open Educational Resources, and we look forward to seeing this project come to fruition. As more faculty and students contribute to the construction of this work, more materials will become available for use; we envision a future in which such a project, fully involving students in the construction of these study texts, can become a truly open,

customizable, and reliable web-based anthology for a variety of literature courses at the college level.

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